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HEWLETT-PACKARD COMPANY
Intellectual Property Administration
3404 E. Harmony Road
Mail Stop 35
FORT COLLINS, CO 80528

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ipa.mail@hp.com
laura.m.clark@hp.com

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte YOSHIO TURNER, GOPALAKRISHNAN JANAKIRAMAN,
and JOSE RENATO SANTOS

Appeal 2009-006784
Application 10/680,911
Technology Center 2400

Decided: March 31, 2010

Before ELENI MANTIS MERCADER, CARL W. WHITEHEAD, Jr., and BRADLEY W. BAUMEISTER, *Administrative Patent Judges*.

MANTIS MERCADER, *Administrative Patent Judge*.

Concurring Opinion filed by *Administrative Patent Judge* BAUMEISTER.

DECISION ON APPEAL

STATEMENT OF THE CASE

Appellants appeal under 35 U.S.C. § 134(a) from the Final Rejection of claims 1-13. We have jurisdiction under 35 U.S.C. § 6(b).

We affirm-in-part.

INVENTION

Appellants' Figure 1 is reproduced below:

Fig. 1

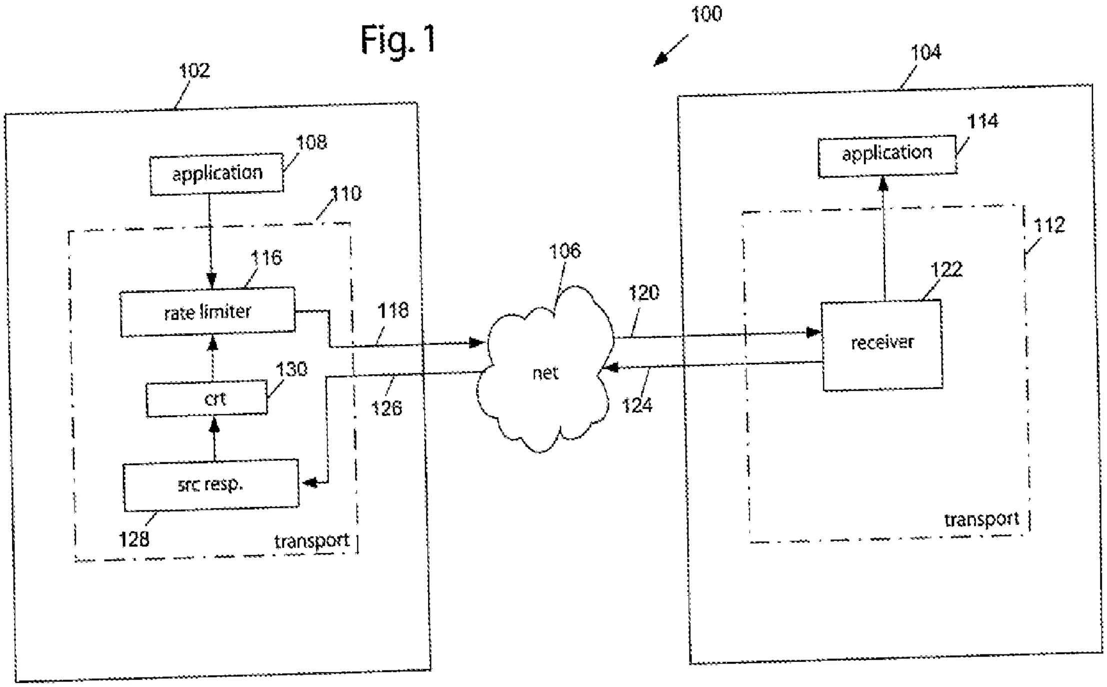

Figure 1 indicates the acknowledgement monitor 128 which decreases or decreases the rate of dataflow (Spec. 3:28-33).

Appellants' claimed invention allows source responses in a network source node (i.e., Fig. 1, source server 102) to increase and decrease flow rate, to exploit congestion signaling bias in order to improve performance. Datapackets from the application 108 are passed down through the transport layer 110 of the sender's communication protocol stack. The incoming datapacket is passed along to receiving application 114 for processing. The rate of datapacket injection into the network is controlled by a rate limiter 116. A datapacket receiver network interface 122 generates an acknowledgment (ACK) datapacket automatically each time it receives an incoming datapacket. The ACK is returned to source server 102. The acknowledgement monitor 128 determines whether the relevant flow to which the ACK datapacket relates is contributing to any congestion in the network 106. The acknowledgement monitor 128 may rely on explicit congestion notification (ECN) techniques. If congestion is detected, the acknowledgement monitor 128 decreases the value of the corresponding flow's rate limit "crt." Otherwise, the acknowledgement monitor 128 infers from an apparent lack of congestion that there is available capacity within the network. It increases the rate limit "crt" to allow the rate limiter 116 to set a higher rate of injection into the network for the relevant flow. *See generally* Spec. 4:3-23, 32-34.

Claim 1, reproduced below, is representative of the subject matter on appeal:

> 1. A method for network bandwidth utilization, comprising:
>
> limiting a particular dataflow injected in a network from a dataflow source to a particular rate;
>
> marking datapackets, at a dataflow destination, with marks that depend on the level of any intervening network congestion;
>
> returning packet marks from said dataflow destination to said dataflow source that indicate a degree of network congestion for said particular dataflow;
>
> increasing the rate of said particular dataflow according to an increase function if said packet marks being returned indicate no congestion; and

> decreasing the rate of said particular dataflow according to a decrease function if said packet marks being returned do indicate congestion,
>
> wherein the increase function is adapted to recover the particular dataflow over a period of time after a decrease in the dataflow rate, the period of time being a constant value for at least two different dataflow rates.

THE REJECTIONS

The Examiner relies upon the following as evidence of unpatentability:

Key	US 6,842,424 B1	Jan. 11, 2005 (filed Sep. 5, 2000)

The following rejections are before us for review:

1. The Examiner rejected claims 1-7[1] under 35 U.S.C. § 112, second paragraph, as being indefinite.

2. The Examiner rejected claims 1, 3-5, 8-11, and 13 under 35 U.S.C. § 102(e) as being anticipated by Key.

ISSUES

The issues are:

(1) whether the limitation of "recover the particular dataflow" as recited in claim 1 is indefinite; and

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[1] The Examiner had initially found claims 1-7 to be indefinite under a first basis and claims 1-13 to be indefinite under a second basis (Final Rejection 2-3, mailed September 28, 2007). However, the Examiner has withdrawn the second basis for the indefiniteness rejection (Ans. 8-9). Accordingly, only claims 1-7 stand rejected under 35 U.S.C. § 112, second paragraph.

(2) whether Key teaches the limitation of "the period of time being a constant value for at least two different dataflow rates."

FINDINGS OF FACT (FF)

The following Findings of Fact are supported by a preponderance of the evidence:

1. The Specification discloses that the network source node (i.e., Fig. 1, source server 102) increases and decreases flow rate, to exploit congestion signaling bias in order "to improve" performance. Spec. 4:32-34.
2. Key teaches congestion avoidance by following a linear increase phase (col. 2, ll. 58-65).

PRINCIPLES OF LAW

Under § 112, second paragraph, claims must be "sufficiently definite such that those skilled in the art would understand what is being claimed when the claim is read in light of the Specification." *Ex parte Miyazaki*, 89 USPQ2d 1207, 1213 (BPAI 2008) (precedential).

"An anticipatory reference . . . need not duplicate word for word what is in the claims." *Standard Havens Products. v. Gencor Indus.*, 953 F.2d 1360, 1369 (Fed. Cir. 1991).

ANALYSIS

I. Rejection of claims 1-7 under 35 U.S.C. § 112, second paragraph, as being indefinite.

Appellants argue that "the particular dataflow," clearly and unambiguously, refers to "the particular dataflow" recited in both the "increasing" and "decreasing" steps of claim 1 (Br. 5). We are persuaded by Appellants' argument. We do not agree with the Examiner's response that "since the dataflow is never ceased, it is unclear how or why the dataflow itself is recovered" (Ans. 8). The term "recover" in the claim is not used as a function of "ceasing," but rather, as a synonym of "improving." *See* FF 1.

The Specification discloses that the network source node (i.e., Fig. 1, source server 102), increases and decreases flow rate, to exploit congestion signaling bias in order "to improve" performance. *Id.* Thus, one skilled in the art would recognize that "recover" as used in the claim in view of the Specification would mean "to improve" the particular dataflow and not to cease the particular dataflow. *See Miyazaki*, 89 USPQ2d at 1213.

Accordingly, we will reverse the Examiner's rejection of claims 1-13 under 35 U.S.C. § 112, second paragraph.

II. Rejection of claims 1, 3-5, 8-11, and 13 under 35 U.S.C. § 102(e) as being anticipated by Key.

Appellants' argue that those skilled in the art would appreciate that a "linear increase phase" as recited in Key (FF 2) will not perform the Appellants' claim 1 function of a recovery period of time with "the period of time being a constant value for at least two different dataflow rates" as recited in claim 1 (Br. 7). Appellants argue that according to the functionality described in the Key patent, if a first dataflow rate is cut in half, (e.g., 100 to 50), and a second rate flow rate is similarly cut in half (e.g., 50 to 25), then the recovery of the first dataflow rate, in a linear phase system, will occur over different periods of time (i.e., the first dataflow rate will take twice as long to recover from 50 to 100 than the second dataflow rate will require to recover from 25 to 50) (Br. 7-8). In other words, Appellants are arguing that 100-50=50, and 50-25=25, and accordingly, the first flow rate will take twice as long as the second flow rate.

The Examiner (Ans. 9) provided a different example, following the same equations as those presented by Appellants, wherein a first dataflow rate has been cut, i.e., from 100 to 50, and a second dataflow rate has been cut, i.e., from 90 to 40, and wherein both of these dataflows would recover their dataflow rate in the same amount of time using the linear increase phase disclosed by Key, since they both have the same rate difference (i.e., 100-50=50 and 90-40=50).

We note that from the record before us, neither the Appellants nor the Examiner provided reasoning as to how Key's "linear increase phase" (FF 2) translates to the sample equations provided by both Appellants and the Examiner. It appears however that both Appellants (Br. 7-8) and the Examiner (Ans. 9) rely on the knowledge of a skilled artisan to correlate the "linear increase phase" with the equations of time recovery of two different dataflow rates. However, Appellants did not argue nor contest the validity of the Examiner's examples and therefore we agree with the Examiner that the linear increase phase does recover the rate of a dataflow in a period of time being "a constant value for at least two different dataflow rates" as recited in claims 1 and 8.

Accordingly, we will affirm the Examiner's rejection of independent claims 1 and 8 under 35 U.S.C. § 102(e). For the above reasons, we are also affirming the rejections of dependent claims 3-5, 9-11 and 13, whose merits are not separately argued. *In re Nielson*, 816 F.2d 1567, 1572 (Fed. Cir. 1987).

CONCLUSIONS

(1). The limitation of "recover the particular dataflow" as recited in claim 1 is not indefinite.

(2). Key teaches the limitation of "the period of time being a constant value for at least two different dataflow rates."

ORDER

The decision of the Examiner to reject claims 1-7 under 35 U.S.C. § 112, second paragraph, is reversed. The decision of the Examiner to reject claims 1, 3-5, 8-11, and 13 under 35 U.S.C. § 102(e) as being anticipated by Key, is affirmed.

No time period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. § 1.136(a)(1)(iv).

AFFIRMED-IN-PART

BAUMEISTER, Administrative Patent Judge, CONCURRING:

I join the majority in reversing the Examiner's indefiniteness rejection of claims 1-7 and in affirming the Examiner's anticipation rejection of claims 1, 3-5, 8-11, and 13. I write separately to more fully address the indefiniteness rejection.

Over three years subsequent to the patent application's filing, Appellants amended claim 1 to newly add the limitation, "wherein the increase function is adapted to recover the particular dataflow *[sic: rate]* over a period of time after a decrease in the dataflow rate, the period of time being a constant value for at least two different dataflow rates." *See* Amendment, filed July 18, 2007 (emphasis added).

The Examiner rejected the amended claim, finding it "unclear what the phrase 'recover the particular dataflow' means." Ans. 8. However, the Examiner further acknowledged that the Specification indicates that "it is the 'rate' of the dataflow that is recovered, not the dataflow itself," and suggested adding the word "rate" to the claim language to clarify the limitation's meaning. *Id.* The Examiner also issued a prior-art rejection, based upon interpreting claim 1 to intend to recite, "adapted to recover the particular dataflow *rate*." *See* Ans. 5.

Appellants too, in arguing the impropriety of the Examiner's prior-art rejection, indicate that the claim language is intended to recite, "recover the particular dataflow *rate* over time." *See* Br. 7 (arguing that if two different flow*rates* are cut in half, "then the recovery of the first dataflow *rate*, in a linear phase system, will occur over different periods of time (i.e., the first dataflow *rate* will take twice as long to recover than . . . the second dataflow *rate* will require to recover . . .)" (emphasis added). To summarize, Appellants and the Examiner are in agreement that claim 1 intends to recite "recover the particular dataflow *rate*" even though claim 1 inaccurately recites that the particular dataflow, itself, is what is recovered. Therefore, because the intended metes and bounds of the claim language can be readily ascertained, and in fact, actually were agreed upon by Appellants and the Examiner, claim 1 cannot be said to be indefinite under 35 U.S.C. § 112, second paragraph.

Moreover, the fact that express language of claim 1 alternatively recites subject matter that may be interpreted as being not supported by the originally-filed Specification (recovering an entire dataflow as opposed to recovering a prior dataflow rate), does not *per se* make the claim indefinite under the second paragraph of 35 U.S.C. § 112. Regardless of what concerns one may have with the claim language's present form, claim 1 has not been shown to be indefinite.

For the forgoing reasons, then, I concur.

AFFIRMED-IN-PART

ELD

HEWLETT PACKARD COMPANY
3404 E. HARMONY ROAD
MAIL STOP 35
INTELLECTUAL PROPERTY ADMINISTRATION
FORT COLLINS, CO 80528